

VOLUME 1

NUMBER 12

MONTANA WILD LIFE



May

OFFICIAL PUBLICATION OF THE
MONTANA STATE FISH AND GAME DEPARTMENT

Herbert Hoover's Doctrine



THE PRESIDENT OF THE UNITED
STATES SAYS:

"OUR stage of civilization is not going to depend upon what we do when we work so much as what we do in our time off. The moral and spiritual forces of our country do not lose ground in the hours we are busy on our jobs—their battle time is the time of leisure. We are organizing the production of leisure. We need better organization of its consumption. We devote vast departments of government and great agencies of commerce and industry, science and invention, to decreasing the hours of work, but we devote comparatively little to improving the hours of recreation . . . And in outdoor experience we make a physieal effort, that no sitting on cushions, benches, or side lines provides. To induce people to take its joys, they need some stimulant from the hunt, the fish or the climb. I am for fish. Fishing is not so much getting fish as it is a state of mind and a lure of the human soul into refreshment. But it's too long between bites; we must have more fish in proportion to the water."

MONTANA WILD LIFE

The Official Publication of The State Fish and Game Commission

VOL. I.

HELENA, MONTANA, MAY, 1929

No. 12

Montana Fishing Season Opens May 21

HERE'S THE OFFICIAL LIST OF CLOSED WATERS IN THE STATE

MONTANA'S fishing season opens May 21. Indications point to one of the greatest tourist seasons in the history of the Treasure State. Throughout the nation the fame of Montana's trout streams has traveled and from throughout the nation are coming thousands of enthusiastic American anglers. They will be welcomed in characteristic Montana manner. Then other thousands of resident anglers who have been itching for the tug on the line, the quiver of the pole and a flash of crimson and silver in swirling riffles, will likewise head toward waters where game fish thrive. To meet these continually growing demands, Montana's Fish and Game Department is working strenuously to keep streams and lakes well stocked.

The spawning season will soon be under way and the largest artificial spawn-taking station in the world, at Georgetown Lake, will be running full blast. This Montana station supplies the spawn for the operation of the 14 state hatcheries, which in turn provide the fingerlings for restocking state waters.

For the guidance of anglers throughout the state and for information of visitors intending to spend their vacations in Montana, a revised list has been prepared of closed streams, those in which the open seasons have been changed and where other action has been taken by the Commission on advice of sportsmen's clubs. The list is segregated into counties for ready reference.

It might be well for fishermen generally to study the list of waters that follows and then request the Missus to sew a patch pocket on the fishing shirt where the license may be conveniently carried. The law requires that anglers must have their licenses in possession, and a missing license may be difficult to explain to a game warden who is conscientiously devoting every effort to conserve and protect the interests of posterity and Montana sportsmen.

Here's the official list taken from the minutes of meetings of the State Fish and Game Commission:

Closed to Fishing During Entire Year

Beaverhead—Big Hole and Red Rock Rivers within 300 feet below the dam.

Carbon—September Morn, Basin Creek and Third Rock Creek Lakes on the Second West Fork of Rock Creek until the regular open season in 1931.

Cascade—The headwaters of Logging Creek from a point above the conjunction of Logging Creek and Big Timber Creek. All of Big Timber Creek and tributaries, all located within the Jefferson National Forest in approximately Township 16 N., Ranges 5 and 6 E. Hardy Creek.

Chouteau—All tributaries of North Fork and South Fork of Highwood Creek, within the Jefferson Forest. All of North Fork above Cow Gulch and South Fork above Big Coulee. Eagle Creek for 12 miles in Townships 26 and 27 N., Range 15 E.

Deer Lodge—Flint Creek from its source to where it flows into Georgetown Lake. Big Spring in Georgetown Lake, closed area to be designated by piles or buoys, for distance of 200 feet north and south on shore line from pumping station and 300 feet from shore line into lake. That part of Stewart Mills Creek beyond where the fence crosses it on Bowman's pasture.

Fergus—Headwaters of Olson Creek.

Flathead—Big Fork of the Flathead and Stillwater closed within 300 feet below the dam.

Gallatin—Sour Dough Creek from Story Crossing to Keggy Lane $1\frac{1}{2}$ miles south. Watkins Creek from where it flows into the Hebgen Dam to its source; South Fork of the Madison River from where it flows into Hebgen Dam to the source and all its tributaries; Cougar Creek from where it flows into Duck Creek to its source; Duck Creek from where it flows into Hebgen Dam to the Yellowstone National Park line; Grayling Creek from where it flows into Hebgen Dam to where it enters Yellowstone National Park, and Tepee Creek from where it enters the Yellowstone National Park to its source, and all its tributaries. South Fork of Ross Creek, known as Cottonwood Creek. Madison River from footbridge that crosses Madison River to the game warden's cabin, to base of Hebgen Dam.

Golden Valley—Swimming Woman Creek from source to mouth and all its tributaries closed from November 1, 1928, to August 1, 1930.

Granite—Big Spring in Georgetown Lake, closed area to be designated by piles or buoys, for distance of 200 feet north and south on shore line from pumping station and 300 feet from shore line into lake. That part of Stewart Mills Creek beyond where the fence crosses on Bowman's pasture.

Hill—All the tributaries of Beaver Creek in Hill county.

Jefferson—Lump Gulch Creek in Jefferson county and all its tributaries from the upper end of Bodkin's ranch to its mouth.

Lake—That portion of South Crow Creek flowing through the property of E. R. Swart of Polson, description of which is S $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 10; N $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 15, Township 20 N., Range 19 M., from November 1, 1928, through December 31, 1929.

Lewis and Clark—Alice Creek from its source to its mouth. Streams and lakes closed for an indefinite period: Seven Mile Creek from the mouth of Skelley Creek to its source, including all tributaries; Skelley Creek and Greenhorn Creeks; Colorado, Sweeney and Walker Creeks and all tributaries; Canyon Creek north of Wilborn and all its tributaries, including Virginia and Little Trout Creeks; Little Prickly Pear and all its tributaries from Trauffer's bridge to its source, including the

Subscription Price Is \$1 On June 1

ON JUNE 1 the subscription price of MONTANA WILD LIFE will be increased from 50 cents to \$1 per year. Because of the increasing demand throughout the nation for the official publication of the State Fish and Game Department, and in justice to the great number who have already paid the subscription, the price will be advanced and names on the complimentary roll dropped from the mailing list. Checks and money orders received up to June 1 will be entered at the introductory price of 50 cents per year. This action is taken by direction of the State Commission.

North Fork, South Fork, Lost Horse and Deadman Creeks; Little Sheep Creek, Marsh Creek, Cottonwood Creek; the Big Blackfoot River from a point immediately below where Alice Creek empties into it to its source, including all its tributaries and Alice Creek; Hogum Creek; Two Point Lake; Twin Lakes and the streams connecting them; Krohn Lake, Beaver Creek, above Gibson Dam, a tributary to Sun River; Hope Creek and Dog Creek, from the forks of the two streams to their sources.

Lincoln—Miller Creek and all its tributaries from source to Fisher River; Flower Creek and all its tributaries from Mountain States Power Company Dam to its source.

Madison—Lower Madison within 300 feet below the Dam; Meadow Creek below point where electric transmission line of the Montana Power Company crosses said creek.

Mineral—Tributaries of the St. Regis River, with the exception of St. Joe Creek, which is open during the regular open season; also Twelve Mile Creek from the mouth of said stream where it empties into the St. Regis River to its source, which is opened during the regular open season; also Big Creek from its mouth near Haugan to the forks.

Missoula—O'Brien Creek and Blanchard Creek; Rattlesnake Creek closed above the Franklin place; Lo Lo Creek closed to fishing from Toward Creek to mouth; Clearwater Lakes to-wit: Inez, Alva, Salmon, Seley, Placid and Rainy Lakes closed to fishing for bass for a period of three years, beginning November 1, 1928.

Pondera—Waters in the ditch from Lake Francis to Conkling.

Powell—Hoyt Creek above the road crossing Ovando; Cottonwood Creek, near Ovando; Jones Lake; Three Mile Creek in its entirety; McCabe Creek, a tributary to Dick Creek.

Sanders—Riveas Creek.

Sweet Grass—Limestone Creek and Trout Creek and all their tributaries.

Stillwater—Bad Canyon Creek, a tributary to the Stillwater; Sioux Charley on the Stillwater below the riffle above the head of the lake; Fishtail Creek and Fiddler Creek, including the North, South and Middle Forks thereof; Limestone Creek and Trout Creek; that portion of Rosebud River where blasting is being done by the Montana Power Company in building a dam.

Wheatland—The tributaries of Big Elk Creek.

Streams and Lakes in Which Closed Season Has Been Suspended

Beaverhead—Upper and Lower Red Rock Lakes and channel connecting them.

Big Horn—Little Horn River from the mouth to the Dam at Crow Agency and on the Big Horn River from its mouth to the Dam at St. Xavier.

Carbon—Clark's Fork River.

Fergus—Judith River from mouth of Spring Creek to mouth of Judith River.

Flathead—Flathead Lake, with hook and line, with the exception of 500 feet of the mouth of any of the streams that flow into the lake, upon which the closed season has not been suspended.

Glacier—Gold, Hellen, Crescent, Harry Coat, Bull Child, Dandy Jim, Browning, Mad Plume and Blackboy Lakes.

Lake—Ninepipe, Kicking Horse and Pablo Reservoirs.

Lewis and Clark—Gravelly Range Lake and Hart Lake.

Madison—Madison River from Red Bridge that crosses Madison River near Red Bluff, north to the Missouri River, and from Lower Dam south to Hutchins' Bridge, except that portion of the Lower Madison west of a line which will be designated by posts from Brannin's Cabin to the Bluff on a line in a southerly direction to the east point.

Musselshell—Musselshell River within the county of Musselshell.

Powell—Cottonwood Creek which flows through the town of Deer Lodge.

Sanders—Clark's Fork of the Columbia River from the Upper Dam of the Montana Power Company to a point even with the power house.

Closed Season Suspended in Rivers Running Through More Than One County

Milk River, Missouri River, Yellowstone River, Kootenai River.

Streams and Lakes on Which Additional Closed Season Has Been Added

Broadwater—All streams in Broadwater county, except Sixteen Mile Creek and the Missouri River, closed to fishing from September 15 to November 1, inclusive, of each year.

Gallatin—Madison River closed to fishing at all points where it flows into the State of Montana before reaching Hebgen Lake, closed period to begin October 1 and end November 30 of each year.

Lincoln—Kilbrennan and Cowles Lakes closed from September 1 to December 1 of each year, in addition to the regular closed season.

Madison—O'Dell Creek and all its tributaries closed from October 1 to May 21 of each year.

Missoula—Harper's Lake closed to fishing from July 1 of each year to the following closed season until further order of the Commission.

Gallatin—All of Townships 1 and 2 N., Ranges 3, 4 and 5 E.; all of Townships 1 and 2 S., Ranges 3, 4 and 5 E., in Gallatin county; the closed season is from October 1 to December 15, inclusive.

Lincoln—Tetrault (known as Carpenter Lake or Lake Irene), Morand, O'Brien, Timber and Frank (known as Lost or Island Lake) Lakes closed to fishing during June, July and August of each year; open to fishing remainder of year; Yaak River, from its mouth to Yaak River Falls; O'Brien Creek from mouth to Troy City Water Dam; Star Creek from mouth to Star Creek Falls, open to fishing during that por-

tion of the closed season from April 20 to May 20 of each year, in addition to regular open season.

Mineral—Crystal Lake Hidden or Diamond Lake, Clear Lake, Rock Lake, Hub Lake, Square Lake, Gold Lake, Eagle Lake, Cliff Lake and Hazel Lake, closed season is April 15 to June 30, both dates inclusive.

Powell—Brown's Lake, closed season is from July 7 to September 30, inclusive, of each year.

Sanders—Rainbow Lake (known as Dog Lake) closed season is from July 6 to November 15, inclusive, of each year.

Sweet Grass—Rein Lake open to fishing from May 1 to June 15 of each year, both dates inclusive, and closed from June 16 of that year to April 30 of the following year, both dates inclusive.

Streams and Lakes on Which Closed Season Has Been Extended

Deer Lodge—All the lakes in Deer Lodge county except Georgetown, Silver and Echo Lakes, from March 15 to July 1 of each year.

Granite—All the lakes in Granite county, with the exception of that portion of Georgetown Lake lying within the county, Echo Lake and Moose Lake from March 15 to July 1 of each year.

Jefferson—North and west ends of Delmo Lake, designated by markers, from March 20 to August 1 of each year.

Lake—Jocko Lakes from May 21 to June 21 of each year.

Powell—Gold Creek, Trask, Dempsey and Thornton Lakes from March 14 to July 1 of each year.

Streams and Lakes Open to Ice Fishing

Deer Lodge—Such portion of Georgetown Lake as is not designated and posted as spawning waters and all of Silver Lake during the regular open season.

Flathead—Rogers Lake open to ice fishing during regular open season.

Glacier—Gold, Hellen, Crescent, Harry Colt, Bull Child, Dandy Jim, Browning, Mad Plume and Blackboy Lakes.

Lake—Ninepipe, Kicking Horse and Pablo Reservoirs throughout the year.

Lewis and Clark—Gravelly Range Lake.

Lincoln—Loon, Dickey, Tetrault, Morand, O'Brien, Timber, Frank, Bull, Savage, Schoolhouse and Milner Lakes.

Madison—Meadow Lake, the open season to begin with the 15th day of December of any one year and close on the 14th day of January of the following year, except within 1,000 feet in all directions of the mouth of Meadow Creek.

Park—Dailey's Lake from January 1 to March 14 of each year.

Powell—Mud Lake from January 1 to March 14 of each year; Brown's Lake, Cooper's Lake, during regular open season for winter of 1929-30.

Sanders—Rainbow Lake (Dog Lake) from November 16 to March 14, both dates inclusive.

Sweet Grass—Glass Lindsey Lake from January 1 to March 14 of each year.

Teton—Splitrock Lake during the regular open season.

Work of the Butte Anglers' Club

Written for MONTANA WILD LIFE By JOHN L. BOARDMAN, Secretary

IN ATTEMPTING to give readers of MONTANA WILD LIFE an idea of the work being done by the Butte Anglers' Club, one must note such vital factors as extent of territory served, population of the area and assistance lent by other similar clubs. Due credit must be given the Anaconda Anglers' Club and the Dillon Anglers' Club, both of which served the same territory as the Butte club, and there has always been maintained a spirit of close friendship and cooperation between officers and members of these clubs and those of the Butte Anglers' Club.

Butte has a population of about 65,000. Among these there are about 9,000 fishing licenses issued each year. The district served also includes a number of large towns, such as Anaconda, Dillon, Whitehall, Three Forks and Twin Bridges, as well as a large number of smaller towns.

There are approximately 3,500 miles of trout fishing stream shore mileage within about 100 miles of Butte. This stream mileage does not include several hundred miles of tributary or small streams. The following tabulation shows approximately the number of main stream miles on each stream served:

	Miles
Big Hole River, Jackson, Montana, to Twin Bridges	150
Rock Creek, Rock Creek Lakes to Armstead	50
Horse Prairie and Grasshopper Creeks	50
Beaverhead River, Armstead to Twin Bridges	100
Ruby River, Twin Bridges to Cliff Lake	60
Madison River, Three Forks to Yellowstone Park	150
Jefferson River, Twin Bridges to Three Forks	75
Boulder River, Jefferson Island to Elk Park	50
West Gallatin River, Three Forks to Yellowstone Park	100
Total	785

Included in this trout fishing country are a number of lakes, such as Madison and Hebgen Lakes on the Madison River, Red Rock Lakes on Red Rock Creek, Henry's Lake and Cliff Lakes on the Upper Madison, Canyon Creek Lake, Lake Agnes and Brown's Lake on the Big Hole tributaries, and Delmo Lake on the Upper Pipestone.

Considering lake shores and the larger tributaries to the streams named, and including the main stream mileage estimated, we feel safe in saying that residents of the area served more or less directly by the Butte Anglers' Club contains 2,000 miles of trout streams and shore distances. Adding to this 1,500 miles, considering both banks of the streams, gives us about 3,500 miles along trout populated streams and lakes, any part of which may be reached

by automobile in a few hours from Butte. All of this territory lies on the east slope of the Continental Divide. There are several hundred miles of fishing streams on the west slope, also served by the Butte Anglers' Club in cooperation with anglers' clubs of Anaconda, Deer Lodge, Philipsburg and Missoula.

The Butte Anglers' Club, as it is now known, is a Montana corporation, organized for the purpose of hatching, rearing and distributing game fish in the streams of southwestern Montana. The organization is an outgrowth of the Montana Anglers' Club, which was formed May 6, 1904. Funds are obtained through annual dues of \$1 per year from each member, contributions of members and friends. The club has enjoyed for the last ten years a membership of from 2,000 to 2,500, and has received in donations from various sources from \$1,000 to \$2,000 per year, thus giving the club a total of from \$3,000 to \$4,000 per year total income.

The officers of the club, consisting of president, vice-president, secretary and treasurer, are elected by ballot at the annual meeting the first Wednesday in April. The day to day business of the club is performed by the executive committee, consisting of the elected officers and ten or more members appointed by the president.

The executive committee meets upon call by the president, or by request of five or more members. The president appoints standing committees made up of members of the executive committee and membership at large, such as "committee on legislation," "rearing ponds and hatcheries committee,"

"membership and finance committee," etc.

At the annual meeting all matters of the business of the club are submitted to the membership for ratification. The treasurer's and auditor's reports, the president's report and recommendations are also presented to the membership.

The club originally began operations by having its members plant such fry and fingerlings as were sent from the Bozeman hatchery. In 1906 the club built its first hatchery and since that time has hatched a large proportion of the fry from eggs supplied by the State Fish and Game Commission distributed in its territory.

In addition to the fry planted from the club's hatchery, the employed fish culturists and the planting committee of the club have from time to time planted fry furnished by the State Commission or the federal government.

An estimate of fry and fingerlings planted for each of the last ten years by the club is as follows:

1919	2,130,000
1920	6,170,000
1921	9,108,000
1922	6,351,000
1923	4,955,500
1924	9,030,000
1925	7,397,000
1926	8,486,000
1927	6,467,000
1928	3,620,200

Total.....62,714,700

Fish eggs have always been furnished by the State Fish and Game Commission.



Here's a picture of the dam and a corner of the building of the Butte Anglers' Club fish hatchery at Divide, Mont., on the Big Hole River. The use of the building has been granted to the enterprising Butte club for use as a hatchery. The plant at Columbia Gardens, where game fish have been hatched from eggs supplied by the State Commission, and then distributed by club members and employes, will be discarded when the Divide hatchery goes into operation this spring.

sion from the Georgetown Lake spawning station, or by the federal government from the spawning station at Meadow Creek, Madison Lake.

In addition to this work of hatching and planting fish, the club has also been active in planting duck food, assisting in planting and hatching upland birds, and in assisting in the enforcement of the state game laws.

As an illustration of a year's operation of the Butte Anglers' Club, the following summary for 1928 shows what the club is endeavoring to do for the sportsmen of southwestern Montana.

Fish distributed from Columbia Gardens hatchery:

Native trout	780,000
Rainbow trout	341,000
Distributed from the Divide hatchery:	
Native trout	1,004,200
Rainbow trout	95,000
Grayling	1,400,000
Total	3,620,200

Total receipts of the club during the year were:

Memberships at \$1.00 each.....	\$1,888.00
Cash donations	923.50
Interest on saving account.....	35.31
Total	\$2,846.81

The above work was accomplished, a second-hand truck was purchased, and two fish culturists were employed for the hatching and planting season, and all paid for, leaving a balance of about \$97 more in the treasury than was on hand at the beginning of the year.

The work outlined for the 1929 season by President William Carpenter, in his address at the annual meeting, includes installation of additional facilities at the Divide hatchery to make it the largest privately owned fish hatchery in the state; cooperation with the federal government in the development of a suitable cheap fish food; extension of rearing pond facilities; survey and development of additional sources of trout spawn by placing traps in creeks tributary to the Big Hole and Beaverhead Rivers, and the raising of \$3,000 in membership dues in addition to donations.

SOUR DOUGH CAMP BREAD

The day before you go camping take a teacup of flour and mix it into a stiff dough, using sour milk instead of water. When in camp add another teacup of flour and enough water to make the whole into a stiff dough, but, into the water you used mix one-half teaspoonful of baking soda. Knead the whole on the back of plate, working in a little bacon grease or lard. Cut and work into round strips the size and shape of a cigar. Impale on the sharpened end of a green stick and hold it in moderate heat until well browned. Eat. If you want bread for several days, simply cut away some of the original piece before you have added any soda and save for future use. The Alaska sourdoughs have used this method, thereby having fresh bread for a summer.

Fur-Bearing Fish

EASTERN dudes beset with the opinion that everything west of Buffalo is outside the United States, that the Mississippi valley is way out west, that most every feller in Montana and sister states goes out and kills himself an Indian before breakfast just to keep in shape, have become interested in the fur-bearing fish discovered and copyrighted by J. H. Hicken of Whitefish, Mont. Mr. Hicken has kindly granted MONTANA WILD LIFE permission to publish the photograph and story of this mysterious piscatorial curiosity. Here's the way he tells it, so believe it or not:



The Fur-Bearing Trout

"The discovery of this fur-bearing fish was made while traveling through Glacier National Park during a sudden drop in temperature, following up of which led to 'Iceberg Lake,' located near Whitefish, Montana. Several hooks were tried, but were broken immediately upon touching the water. Finally, one was heated, and when this hit the water, the temperature tempered the hook, with the result that one of the fish was caught.

"The water in this lake is so cold that nature has taken care of her own by providing the fish with a thick coat of fur. In fact the water is so cold that it is beyond the freezing point.

"The beazel, a very rare specimen, is found only on Prince Edward Island and lives on the hum of the humming bird. They were found to be the only bait that these fish will bite except in extreme warm weather, when it has been learned that they will bite on 'ice worms.' Another peculiarity of this fish is that it follows the precept of

the poet who said: 'In the spring a young man's fancy lightly turns to thoughts of love.' So, with these fish, and during this period with a portable phonograph, by putting on a love song the fish will come to the surface, and the quick transfer to a jazz record results in them shaking themselves to death, when they can be picked out of the water.

"It has been found that these fish absolutely refuse to bite during the 'love' month of June, but, as there is always a black sheep in every family, the one caught (picture of which has been taken) disgraced himself before the entire family and suffered the usual penalty.

"They make a rare fight in landing them out of the water, due to the fact that nature has provided them with this fur, which ruffles and causes such a resistance that it is practically impossible to land them only under most favorable circumstances. The fur also acts as an accelerator, and when they step on the gas with their tails and fins their speed is beyond any known fish at the present time. This, in turn, also acts as a brake in reducing speed or stopping, by simply putting the fur against the grain, and is their protection against survival of the fittest.

"The change of temperature from this water to atmosphere is so great that the fish explodes upon being taken from the water, and fur and skin come off in one perfect piece, making it available for tanning and commercial purposes, and leaving the body of the fish for refrigerator purposes or eating, as desired; the body keeping the ordinary refrigerator cold for two or three months and no ice required. If fish is desired for eating purposes it will take several days' cooking to reduce temperature to a point where ordinary people can dispose of it.

"If the fur is made into a neck piece it has been found to be a cure for goitre and tonsillitis; the fur stimulating circulation to such an extent that all impurities are removed. The fish has been so recently discovered that information regarding their habits, etc., is very meager, but further details will be given when available."

BIG FIRE IS MISTAKE

A large camp fire for cooking purposes is impractical. The big fire is the mistake of almost every amateur camper. If necessary for comfort, build two fires. Try letting your cooking fire burn down to glowing coals before using, replacing new bits of coals from the other fire from time to time. To have the best success, a small trench is always best. Across this trench when it is once filled with glowing coals, lay several lengths of green wood. On these place your different cooking utensils. A small, glowing camp fire is a pleasure; a large one in full blaze drives one to tears.

CAN WE BEAR IT?

Girls when they went out to swim, Once dressed like Mother Hubbard; Now they have a bolder whim; They dress more like her cupboard.

SEASON OPENS MAY 21

One night I dreamt I died an' went
To my new home, up yonder.
I didn't see no fishin' place,
So I begins to wonder.
I told Saint Pete I wished to do
A little bit o' fishin';
He laughed an' said he guessed I'd
have
To take it out in wishin'.
"No fishin' here?" I asked the Saint.
He answered, "Not a smell."
"Then I'm goin' somewheres else."
I says,
"For this is shorely—well,
"I thought in heaven a man could
have
Most anything he'd wish.
So count me out," says I; "I'm goin'
Whar I can ketch some fish."

As A Forest Fire

By ALEXIS SMYTHESON

YIP-YAP, the coyote, is an enemy of wild life. Granted. But the house cat, the shotgun user, and the poisoner, are greater. The coyote destroys wild life that he may live. The house cat is a wanton killer. For each duck, goose or quail bagged by the shotgun, from two to five perish by the lingering death from shotgun wounds. If the shotgun and the poisoner were eliminated, Yip-Yap's toll of wild life will be unnoticeable.

I promised W. L. Beaty of the "Bug House of America" to give some of my observations regarding the use of poison as a means of exterminating the predatory coyote. Poison has exterminated the coyote as much as prohibition has exterminated booze. Booze and Yip-Yap are not far to seek.

For more than ten years I lived in the "park country" above the great Saskatchewan River, which has and does furnish more coyote furs than any other part of Canada. In all that time the coyote killed ten fowls and one turkey. My neighbors' dogs killed 170 in three nights.

Poison does kill some coyotes. It drives the brainy ones to seek new hunting grounds. It produces mange and many a coyote credited with rabies is simply in the after effects of poison.

I trapped one winter near Ministickwan Lake on the headwaters of the Little Red Deer, north of "53." On one trap line in five miles I saw where 20 wolves had eaten from the poison sets placed every quarter of a mile. Every wolf had had convulsions—and recovered—and left for safer places. They also left the poison to spread death among the chickadees, jays, ravens and eagles. I know. I saw the results on all sides.

Like many others I couldn't be told. I had to learn by bitter experience. I secured some C. P. strychnine crystals. When I shot a deer I found I had forgot the crystals. As some 50 wolves had howled at us all night I returned next day to use the deadly crystals. The wolves had not left a scrap. They howled at me from a nearby muskeg while I made the examination. A week later my partner shot a deer (it was open season and we had licenses). Determined to try my poison I sprinkled on the crystals as pard disemboweled the deer. I got results. The results of the poisoner. But I got no wolves. They sat in distant circles and howled curses for a month at the feast a fool white man had spoiled for them. No wolf touched that poison all winter, but I had laid a death trap for all the birds and squirrels in the neighborhood. I burned my poison. I don't use it. You couldn't hire me to use it for I have learned my lesson.

I belong to a group of men who destroy more coyotes than perhaps any group in America. We use only the

ABOUT POISON

STOCKMEN and sportsmen of Montana who have watched the work of hunters of predatory animals employed by the Biological Survey, the State Livestock Commission and the State Fish and Game Commission, have made a study of the effect of the use of poison. For the information of readers of MONTANA WILD LIFE two articles have been prepared. The accompanying interesting appeal urges that poison be barred in killing predatory animals. The answer to this article, written by R. E. Bateman, leader of predatory animal control in Montana, will be published in the June edition. It tells the other side of the story. Watch for it.

trap. Not long ago one of this group came into our headquarters, his eyes ablaze. He had just returned from a district where poisoners were putting the carcasses of poisoned coyotes on the fences, where they were making a fatal feast for the birds of the air.

The observations of my group extends from north of "53" in Canada to the Mexican border. Poison kills coyotes as forest fires destroy trees. You can't set a forest fire and burn only trees of a certain size. No more can poison be put out for coyotes with any assurance that the coyote alone will eat it. Has the poisoner any magic in his methods that causes only the coyote to eat poison? You know better. So do I! Chickadees, song sparrows, robins, thrushes, the mighty eagle all fall as sacrifice to poison.

The house cat of America annually destroys millions of wild life. The shotgun destroys a hundred times that much. An Indian friend of mine counted in one day along a two-mile strip of river over 200 ducks dying of shotgun wounds. In northern Ontario one game warden counted more than 200 moose dying or dead wounded by hunters too lazy to follow their kills. The coyote does destroy wild life. I don't defend him. But the coyote is a gentleman compared with poison.

In MONTANA WILD LIFE, December, 1928, page 12, I saw a photo of a month's coyote catch by E. B. Warren. If Mr. Warren caught the coyotes with trap or rifle, I have nothing to say. But if he poisoned them, then I want to know what he did with the carcasses. How many poison baits he placed for each coyote killed and if said baits are still at large or buried or burned. I see another side to that photo. A great pile of dead birds. More dead squirrels than I'd care to carry, a long line of empty birds' nests moulding and rotting for want of birds.

When first I went to Canada almost every lake was black with wild ducks.

Last year the most I counted on any lake was 20 ducks. Same with geese. Blame the coyote! Not me! For each duck or goose Yip-Yap has killed the shotgun has destroyed a hundred. For each song bird the coyote has eaten, the house cat has killed ten.

In all too many places in Canada and in the States I notice where forest fires have raged. Bare, bleak, desolate. Terrible destruction. The other day I saw a place here in Montana. Hills, woods and streams in abundance. The scene was conspicuous by its absence of tracks of wild life. I saw not so much as a jackdaw. One of our group was with me. He uttered one word explaining the utter absence of wild life. Poison. All I could think of was forest fires.

Let the poison method be used for another five years and wild life in America is doomed. Our wild places shall be as innocent of any wild life as the craters of the moon.

Look again at the photo. Killed by trap or rifle, it means so many dead coyotes. Killed by poison it means a host of song birds, game birds, more than one eagle destined by nature to live a century, merely a heap of rotting feathers. Repeat this picture over and over from Canada to Mexico. When told that an arm of our government was using poison I could not credit my ears. Would the government hire men to fire our forests? Once the people understand, had they one-quarter the chance to see what I have seen, any use of poison for any kind of wild life would be impossible.

Today most of the North American Indians live in Canada. They know by bitter experience the devastating effects of poison. Any Indian using poison would prove as popular as a fool who tries to kill a governor.

To me, putting the coyote in his place is a simple problem. No more shotguns. All house cats on a leash. No more poison. Then our wild places will again teem with wild life. Yip-Yap will have so much to eat he can easily be kept in his place by trap and rifle. But to think of exterminating the coyote by poison reveals the same type of mind that endeavors to bump an electric engine from the rails with a flivver. What I am trying to say is—Don't use poison.

A SATURDAY NIGHT SETTLER

"Rastus," said the judge, sternly, "you are guilty of having stolen two chickens from Mr. Berg's coop last Saturday night. The fine will be \$5.00."

Smiling pleasantly, Rastus approached the clerk of the court and laid a \$10.00 bill on the desk. "Yassuh, judge," he said, "so ah gives you ten bucks which will pay you up to and includin' nixt Sattiday night."

MONTANA STATE FISH AND GAME COMMISSION

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MONTANA MEN WIN HONORS

WHEN Horace Albright, who has served efficiently as superintendent of Yellowstone National Park, was promoted to the chair of chief of the national parks service, Montana sportsmen universally congratulated the federal department in its selection. Roger Toll, who made his first trip through the park by wagon in 1902, succeeds Mr. Albright, while Sam Woodring, chief ranger, and a friend of thousands of lovers of the out-of-doors in Montana, becomes superintendent of the newly created Grand Teton Park, immediately south of the Yellowstone.

The last session of congress enlarged the national park system of the country nearly 200,000 square miles, the largest addition being the new park to be known as the Grand Teton National Park in Wyoming, which embraces the Teton Mountains south of Yellowstone National Park and which had been recommended for inclusion in an addition to Yellowstone. The Grand Teton National Park embraces 150,000 square miles. The establishment of this park is the result of a 31-year campaign.

Another new park will be Bryce Canyon National Park in southern Utah. It is a small area of 22,000 square miles but embraces remarkable natural phenomena of fantastic eroded pinnacles vividly colored.

Additions were made to the Acadia National Park on the coast of Maine, to Yellowstone Park, to Lassen National Park in northern California and to Rocky Mountain National Park in Colorado.

Congress also passed a bill creating Onachita National Park in Arkansas but this act failed of approval by the President.

The Secretary of the Interior was authorized by Congress to investigate the advisability of establishing a national park in the Everglades of Florida.

Many bills proposing other national parks failed to receive final consideration. Opposition to many of these projects appeared on the ground that the areas proposed did not embrace features measuring up to national park standards.

Inscription on a tombstone: "HERE LIES AN ATHEIST ALL DRESSED UP AND NO PLACE TO GO."

"Thank goodness," exclaimed the optimist who lost his leg in the railway accident, "it was the one with the rheumatism."

IN THE JUNE EDITION

ACHIEVEMENTS of the biological research station conducted on Flathead Lake by Montana's State Fish and Game Commission, in cooperation with trained scientists of the University of Montana, will be reviewed in the June edition of MONTANA WILD LIFE. Detailed reports of the chemistry, physics, botany and zoology of the greatest body of fresh water within the state have been prepared by the scientists themselves. These reports, which outline the plankton, the fish food, the varieties and assortments of fish life in the lake, the commercial whitefish program and other interesting details of scientific importance, will be set forth in such manner that they can be understood by the man who runs. After an extended conference with Chancellor M. A. Brannon of the Greater University, the State Commission has instructed that the complete report of findings be included as a feature of the June number of the official publication of the Department. This publication will be of extraordinary value to schools, libraries, scientific investigations and sportsmen generally. The work of the biological station, which was the first of its kind in the world, will be continued during the summer with special attention paid to Georgetown Lake, where the Commission maintains the largest artificial spawn-taking station in existence at the mouth of Flint Creek. This station supplies the game trout eggs which keep the battery of 14 state hatcheries operating throughout the year producing fingerlings with which to stock Montana's streams.

Wouldn't it be great if the safety razor blades were as strong and as keen as the competition between their manufacturers?

RESTRICTIVE FIREARM LEGISLATION

THAT provision of the United States Constitution which guarantees American citizens the right to keep and bear arms is frequently being infringed by state laws. The object of most of such laws or proposed acts is meritorious in that the purpose generally is the curbing of crime. There doesn't seem to be difficulty, however, in states that have enacted such legislation for criminals to obtain firearms and the actual effect of such laws is to hamper honest, law-abiding citizens in the possession and ownership of firearms rather than to check the criminal class.

An act was proposed in the recent legislative session of Missouri which would prohibit the possession and use of rifles in that state.

A report made by the Metropolitan Life Insurance Company gives the causes of a large number of accidents for which damage claims were paid, which were as follows:

Automobile accidents, 1655; cranking motors, 334; hurt in homes, 920; falling objects, 748; bites of animals, etc., 131; falling from bed, 8; falling from animals, 14; falling on stairs, 630; falling in bath tub, 31; injured on athletic field, 15; injured on bathing beaches, 128; in baseball, 184; in basketball, 49; in football, 46; in golf, 34; dancing, 12; bowling, 18; fishing, 19; injured by firearms, 15.

Accidental injury from firearms is of such rare occurrence as to figure but slightly in the tabulation. It would seem to be more dangerous to take a bath than to go hunting.

Aside from the desirability of continuing the use of firearms in sport and recreation, it is to the advantage of the country that its young men be familiar with firearms and understand their use. No one can say when it may be necessary that a large element of our young manhood should know something of the use of guns.

GIVE THE TROUT A CHANCE

WHILE such restrictions as bag limits, proscribed methods of taking fish and game, and other regulations, are not sufficient in themselves to rehabilitate wild game life in this country and while propagation and restoration methods are more effective, yet certain restrictive regulations are necessary to prevent wholesale and ruthless slaughter by lawless and unprincipled persons.

The argument is frequently heard, "Why any restriction on method of killing fish? Your bag limits the catch; why not let the fish be taken by any method?" The answer is: Unsportsmanlike and destructive methods of killing fish and game reduce the supply so rapidly that bag limits would not prevent rapid depletion; for instance, dynamiting fish, killing them with lime or other deleterious chemicals, trapping, netting, and similar methods have been prohibited by law as extremely destructive. Use of the spear should be permitted only for killing such predatory species as carp and should never be allowed for killing game fish under any circumstances.

Sportsmanlike methods of taking fish and game will not seriously deplete the supply. A sportsmanlike chance gives the fish and game a chance, which can hardly be said of gang hooks on artificial bait. A single hook on a plug gives the fish a decent show. Barbless hooks do likewise.

The anti-billboard crusade should go still further. It should put a "Post-No-Bills" sign on every mail box.

DEAD DUCKS LAY NO EGGS

DID you ever study arithmetic, friend duck hunter? Suppose a state issues 300,000 hunting licenses every year and 200,000 of them take a whack at the pin-tails, the greenheads and the cans. Supposing each one of the 200,000 gets the limit of 25 ducks only twice during the season. That makes a kill of ten million ducks in one state in one season, says a writer in *Sunset*. Now does it become clear why the multiplication of guns and gun clubs automatically brings out a rapid reduction in the number of ducks?

Most of the northern states traversed by the migratory birds in their fall flight, states in which the season lasts for only a few weeks, have cut the daily limit to 15 or even less, with drastic restrictions on the size of the weekly bag. But the southern states in which the ducks have their winter homes, states that have shooting seasons lasting for three months or longer, still allow a daily bag of 25 and tolerate rather large weekly limits. Among these sinners California is conspicuous. Year after year the number of its gun clubs has gone up and that of its ducks and geese has gone down, but the bag limit has not changed even though its neighbors to the north cut this limit long ago.

There are many plausible arguments against the reduction of this bag limit, but none of them can overcome the fact that a dead duck lays no eggs.

The best example of rigid economy is a dead Scotchman.

BEAVERS AGAIN PENNSYLVANIA PROBLEM

AFTER almost a century of absence beavers have come back to the streams of Pennsylvania and in sufficient numbers to cause the game commission some worry in controlling their activities. Because of the value of their hides beavers were one of the first of the wild animals to be killed and trapped to extinction. Counties, towns and townships were named for them, as in the case in Montana where there are some 35 Beaver creeks, but that was the only sign the present generation saw to remind them that once the streams of the state had swarmed with beavers.

About ten years ago the Pennsylvania game commission purchased several pairs and liberated them in the most mountainous sections of the state. The original purchase was followed with others until a total of 70 had been bought. Most of them came from Canada. Meanwhile stringent laws had been enacted making the killing or trapping of one punishable with a fine of \$100. The same fine covered destruction of their dams or houses. Under such conditions the beavers multiplied rapidly and in a few years were found living in natural conditions where suitable food was available.

MICHIGAN BREEDS MALLARDS

MICHIGAN'S Department of Conservation has under consideration a plan to increase the number of breeding mallard ducks throughout that state, according to a method long advocated by the American Game Protective Association. The plan of operation to be undertaken by the game division of the department is to release numbers of these birds in units of one drake and several ducks in suitable territory now devoid or sparsely inhabited during the spring and summer months by this species. This liberation is to be made prior to the nesting season in the upper peninsula and certain marshy areas and game refuges elsewhere throughout the state. It is reasonable to expect that the result will be that these birds will nest in the locality where liberated, thus insuring a plentiful supply of local bred ducks for fall shooting. It is the intention to band as many as possible of the young mallards that their migrations may be checked. This is a promising field for increasing waterfowl shooting. By methods similar to this sportsmen's clubs and individuals can with slight expenditure encourage the breeding of mallard ducks in enormous numbers.

If we judge by the number of its white-collar workers, America is fast becoming swivelized.

PHEASANTS HELP FARMERS

ANOTHER use has been found for the Chinese ringneck pheasant. Game commissioners of Pennsylvania have announced that proof has been found that the ringneck pheasant feeds on Japanese beetles, one of the most serious insect pests found in Eastern United States. The stomachs of numerous birds which have been killed have been examined and found to contain hundreds of these destructive insects. It has also been shown that the starling, an otherwise unpopular introduced alien bird, feeds on the Japanese beetles. The skunk has also been observed eating the same insects. The Japanese beetle, brought to America in some imported Japanese plant, has become established in certain parts of the East and has grown to be a most dangerous pest to agriculturists and horticulturists. Its devastations include orchards, vineyards, gardens, shade trees and all manner of useful plants.

Too many people are wishing their marriage licenses would expire.

PLANTING EUROPEAN PARTRIDGE

AERICAN sportsmen who are investing large sums of money through their fish and game departments and otherwise in Hungarian or European partridge which are being stocked in various parts of the United States are eager for information which will be of assistance to them in determining suitable localities for planting and proper care of the birds when stocked.

An authority on this subject is J. Carlton Hunting of Gaybird Farm, Great Missenden, Cheshire, England. In an article in *AMERICAN GAME*, Mr. Hunting gives some exceedingly valuable information on this subject, particularly with reference to the food habits of the partridge and its protection from predatory species. Mr. Hunting says that any attempt to breed or introduce the partridge in the wild state must be accompanied by good "keeping"; it is not enough to turn the birds loose in apparently suitable locations and let them shift for themselves. Mr. Hunting's suggestion involves the necessity of employing trained gamekeepers to look after the welfare of the birds where planted.

In order that the Hungarian partridge may be successfully planted in this country there must be a systematic extermination of vermin on lands to be stocked. The birds invariably suffer great depletion on account of the toll taken from predaceous birds and animals to which they are unaccustomed in their native country. The birds are not migratory and tend to remain in the same locality where planted. Mr. Hunting states that the hand-reared bird lays more eggs in captivity than the wild one and if some means can be discovered whereby the mortality of penned stock may be reduced, artificial partridge farming may be conducted on a large scale.

This man Hoover may be a Quaker but he certainly knows his oats.

U. S. Cuts Elk Herd on Bison Range

By FRANK H. ROSE, U. S. Reservation Protector

ELK WERE first placed on the National Bison Range at Moiese, Mont., in 1911 when seven head were shipped in from Jackson Hole.



In the center of the above picture is shown another single file—Indian style—band of elk being driven to the corrals during the reduction of the herd in February, 1929. These photos are all supplied by the Biological Survey.

The next year five were added from St. Anthony, Idaho, followed in 1913 with nine more from Jackson. Three years later 26 head were moved from Yellowstone Park, completing an original stock of 47 head. No elk have since been added. The range proved adapted to elk as to other animals and they have increased at an apparently unusual rate. By 1923 the game herds on the Bison Range had grown to a number that began to threaten the existence of the more palatable forage, and it was then recognized that extensive reductions would be necessary.

Thirty-six aged bulls were killed and sold for meat purposes the fall of 1924, a method of disposal which has been opposed by a number of sportsmen and others, but a method which may be available when other more desirable methods are not.

Consideration was given by the state at the time to removing the animals and placing them upon state ranges, but after considerable investigation the Commission decided that due to the heavy expense involved in installing capturing corrals and other improvements necessary to get the animals out, and the need for other wild life work in the state, they would not be justified in attempting to remove the elk.

The elk were then contracted to a Massachusetts company which proposed breeding elk commercially. They installed fences and other improvements on the Bison Range to capture the animals and in 1926 made the largest single shipment of live wild animals of record, a full train load of 388 elk. A second shipment was to have been taken under the same contract early in 1927, but was not; either the range requirements of the animals already shipped was greater than had been ex-

pected or the difficulty of financing too great. Thirty-seven males and one female were, however, butchered on the Bison Range by a representative of the company that fall. By 1928 it became apparent that the contract of the Massachusetts company would expire without their being able to complete the removal of the elk and 176 were released to another proposed game farm in Montana, and 40, applied for by the state, were taken by trucks to state game ranges.

Examinations of the grasses of the Bison Range last summer and fall convinced the Survey officials of the danger in too long continued delay in making necessary reductions and the Bureau determined upon more vigorous measures. Sixty elk were sold under bid along with 144 buffalo in the fall and later authorization was made to give elk to any person who would remove them without cost to the government. The State of Montana was given a preference on any animals they might desire and those animals corraled and found unsuited to other purposes were authorized turned over to the Indian Service for issue to needy Indians. Under this arrangement 213 elk were

shipped for stocking the big game ranges of Montana, the State Game Commission and the local rod and gun clubs cooperating. Forty-four were



This picture of the famous Jocko valley between Ravalli and Arlee was taken by the Biological Survey on the National Bison Range during the elk roundup of the last winter. Here in the lowlands the elk find their winter range.

shipped by the Bureau out of the state to zoos or parks, and 105 of the elk corraled, unnecessary or unsuited for

The shipments that have gone from the National Bison Range to state ranges were as follows:

Date	Locality	Male		Female		Total
		Mature Spikes	Fawn	Mature	Fawn	
1-21-28	Wolf Creek Game Refuge	8	...	22	...	30
2-16-28	Polson	2	1	7	...	10
3-21-29	Libby	6	4	29	7	47
3-26-29	Libby	3	8	21	14	54
4-1-29	Red Lodge	7	2	31	7	49
4-10-29	Polson	5	7
4-11-29	Polson	...	3	6	3	12
4-17-29	Roy	6	2	4	28	44
Total		32	20	23	138	253



Here's another good view of the thin brown line of elk along the snow-covered mountain side, being driven to the corrals on the National Bison Range for shipment to other ranges.

propagation purposes and for which no other disposal could be arranged were killed in the corrals by the Indian Service and the meat issued to Indians of the Flathead Reservation. There are probably 30 bulls and 20 cows left on the Bison Range and it is planned to keep the herd always under 100 head.

Unusual difficulties were experienced in capturing the elk this spring. Although the range is under a township in area it is rough and much of it is difficult to ride. The animals were weak after a hard winter, yet wild, and displayed a tendency to scatter and hide or slip back to the area from which they had been started, which at times made their capture appear all but hopeless. Deep snow in the higher and timbered areas, and stormy weather, were a handicap, as was our inability at this time of year to secure riders with horses grained up and conditioned for hard riding. The elk roundup started on February 20 and was not completed until April 16, riders covering on 25 different days an area from

which range cattle would have been gathered in a day or two at most.

A 70-foot Northern Pacific express



Elk being driven through the deep snow of the National Bison Range at Moiese, toward the corrals where they were loaded and shipped for transplanting. Note the single file—Indian style—in which they travel.

car was fitted with partitions to form nine pens. These were deeply bedded with straw and hay and troughs provided for watering en route. Bulls not

yet shed were first dehorned and the animals distributed in the pens according to size to reduce the danger of loss by trampling. This car was returned with the equipment for each carload shipment. Notwithstanding the weakened condition of the animals, and cows heavy with calf, only two animals shipped this spring were reported dead upon arrival and the total loss in shipment was remarkably low.

The elk were loaded aboard cars or in trucks at the Bison Range at a cost to the State Game Commission and cooperating sportsmen under \$5.00 per head, exclusive of contributed time, and delivered on the range at from \$10 to \$12 per head. Requests for 10 or 12 carloads of elk for ranges outside of Montana had to be refused.

BEAR FAT ON LINE

Bear fat, such as is used to oil a fly line, will keep a dry fly floating much longer than fly oil. Rub on fat with your fingers. It is not necessary to grease the fly again until four or five fish have been caught, where one must use the fly oil after each good strike. But first you must catch the bear.

The following tabulation showing how elk have increased on the 18,500-acre fenced range of the Biological Survey at Moiese will be interesting to sportsmen, although the same rate of increase is not to be expected on the open range:

Year Elk Stocked	Live		Reductions		Losses		Total
	Male	Female	Male	Female	Male	Female	
1911 7 Jackson							
1912 5 St. Anthony, Idaho.....							
1913 9 Jackson							
1914							
1915							
1916 26 Yellowstone							
1917							
1918							
1919							
1920							
1921							
1922							
1923 Total reductions to 1923.....					9	10	19
1924			36		1		37
1925					3	1	4
1926	133	255			23	10	421
1927			37	1	6	1	45
1928	29	187	56	4	14	8	296
1929	81	176	92	13	13	16	391
Total 47	243	618	221	18	69	46	1215

Acts and considerable supervisory work in connection with the bird refuges under the jurisdiction of the Biological Survey in that region. He has been highly successful in enlisting the co-operation of state officials, sportsmen's organizations, and individuals with the Biological Survey, and in creating local respect for the game laws administered by the Survey. He has carried on numerous investigations also at points in Oregon and California where a malady among wild ducks has been prevalent, and has represented the Alaska Game Commission at the port of Seattle in the enforcement of the law and regulations pertaining to the importation of land fur-bearing animals of that territory. This work was carried on coincidentally with that of his duties as U. S. game protector.

Cosner and His Grouse



RUEL COSNER of Missoula, one of Montana's best known and admired advocates of wild life conservation, is consistently active in organizations interested in preserving hunting and fishing for future generations. He is shown in the picture with 10 sharp-tailed grouse. The state law provides five as the limit. No, you're wrong. His hunting pal took the picture. It has been said by cronies of Ruel Cosner that he has made it a rule never to go afield with more than five shells in his pocket. That's all he needs to get the limit.

RADIO

Little Girl (disturbed at her prayers by scratching on the screen door): "Stand by, God, while I let the cat out."

Honor for Ray Steele

THE resignation of William T. Cox as superintendent of the Upper Mississippi River Wild Life and Fish Refuge to accept appointment with the government of Brazil for the purpose of organizing a national forest service for that country, has been announced by Paul G. Redington, chief of the Bureau of Biological Survey of the United States Department of Agriculture. Mr. Cox will probably assume his new responsibilities about July 1, when he will be succeeded as superintendent of the Upper Mississippi Refuge by Ray C. Steele, game protector of the Biological Survey, with headquarters at Portland, Ore., and well known in Montana.

Mr. Cox has long been identified with the conservation work of both federal and state governments, having entered

the Forest Service, U. S. Department of Agriculture, in 1901.

Ray C. Steele assumes his new duties as superintendent of the Upper Mississippi Wild Life Refuge with an extensive acquaintance with wild life and a keen interest in the conservation of both birds and mammals. He is a native of Missouri and received his early education in the public and business schools in Waitsburg, Wash. In 1917 he enlisted for military duty and served through the World War. His first appointment with the Biological Survey was on February 9, 1920, when he was made U. S. game protector with headquarters first at Seattle and later at Portland, his district including the entire State of Oregon and that part of Washington west of the Cascade Mountains.

As a representative of the Biological Survey in the northwest, Mr. Steele's duties have included the enforcement of the Migratory Bird Treaty and Lacey

Education in Conservation

WILD LIFE conservation endeavor without the support of public sentiment would progress slowly, regardless of laws and regulations and the most earnest effort to enforce them.

Public sentiment is created by an understanding of the problems involved, which means education; so education is recognized as one of the most important factors contributing to the protection, restoration and perpetuation of our wild life resources.

Conservation education may be advanced in many ways—through the activities of the game and fish department and the conscientious devotion of its wardens to their duties; through the interest of sportsmen's clubs and similar organizations concerned in the preservation of our outdoor resources; through publications; by informing the youth, which is highly essential, and by means of numerous other agencies.

"The problem of outdoor life conservation is more than an administrative one," Keith McCause, Game and Fish Commissioner for the State of Missouri, said at the last annual meeting of the International Association of Game, Fish and Conservation Commissioners, at Seattle. Robert H. Hill, Montana Game Warden, and Chairman T. N. Marlowe represented Montana. "It is primarily a social problem—a moulding of public thought so that there may be a better appreciation and wiser use of our out-of-doors."

Commissioner McCause reviewed the trend of public sentiment, through education, in his state.

"The public mind is changing," he said. "A few years ago a game warden was looked upon with disdain. In the Ozark hills there was a continuous open season on game wardens. An Ozark native was not considered worth his spurs unless he had the scalp of a game warden or two hung on his belt. Those times have changed. The native has now seen a new light. He has come to the conclusion that the game and fish department is endeavoring to bring him something rather than to take away his privileges. * * * More and more our people have been won over to the lure of woods and streams and the open spaces of our commonwealth. Health and happiness and the delights of hunting and fishing have done wonders in the forward march of the Ozark country."

"Along with the importation of deer, quail and pheasants, with the planting of fish in the streams, and the enforcement of the game and fish code, we have devoted a goodly portion of our effort to publicity. This we have done under a bureau of public information with experienced newspaper men, our object being to let the people know what we are doing, and to awaken the public to a point where it would become conservation-minded."

"All of this we call education. Education in conservation is a big thing.

It is, in fact, the greatest factor in conservation. It deals with the question of whether the people want full advantage taken of their natural resources; it embraces the stimulating of a proper esteem for those things the Great Maker has given us, and it entails the acquiring of widespread knowledge concerning our outdoor possessions and their conservation.

"Conservation has had an evangelistic beginning with an intensified crusade for the salvation of our wild life and a revival of the spirit of conservation. This spreading of the gospel has been splendidly advanced by outdoor writers and speakers, outdoor magazines, and the combined effort of progressive sportsmen under the han-

ners of many conservation organizations."

Montana sportsmen's organizations are advocating the teaching of conservation as a regular part of the school curriculum. Concerning that subject, Commissioner McCause said

"History has taught us that the teacher follows in the wake of the crusader. Has not the time come in conservation when we should soberly go about the teaching of its principles in an organized, systematic manner through the machinery that has been set up in this country for the educating of its people, the public school system of America? Much has been said about the importance of education in conservation. Much has been done, particularly through the press with special emphasis on the conservation magazines. Some work has been done in the schools, but to my mind here lies our greatest opportunity—an opportunity that should not be dealt with in a haphazard manner. It is readily conceded that the education of the American youth would be the greatest influence that could be had for conservation, and yet there seems to be no comprehensive plan of accomplishing this end. I submit to you that no more forward step could be taken for conservation of the wild life of America than to adopt textbooks and make it compulsory that conservation of our outdoors be taught in the public schools throughout the nation."

"Conservation textbooks adaptable for use in the elementary grades of our schools have not yet been evolved. When the demand exists the textbooks will no doubt be forthcoming. I propose to start the demand so far at least as Missouri is concerned by sponsoring in our next legislature a bill making it mandatory that the conservation of our wild life resources be made a part of the course of study of our elementary grades."

"It is not a course in nature study that is needed, as good a thing as that is, but one in conservation. A course that will not only instill in the youngsters of America the desire to conserve the remnants of our wild life, but will teach the methods by which these results can be attained. Various species should be dealt with, but their descriptions should be incidental to a teaching of their benefits or demerits and the means of conserving or reducing according to which is desirable. When the youth of this nation understands the necessity of conservation and the methods by which it can be accomplished, all fears for the future may be laid aside."

"Along with the teaching of conservation there will develop in our people generally a much greater knowledge of our wild life than now exists."

"We will learn, as a people, game and fish management. We will learn that the administration of our game

He Makes Birds Talk



HERE'S a queer combination of bird pets. A. G. Gillespie of Grass Range, Mont., is shown in the picture with a Dickey bird—a friendly canary perched on his finger, while another friend, Maggie, the magpie, is parked on his shoulder. Mr. Gillespie has gained a reputation because of his ability to train magpies, seagulls and other birds to talk to him without splitting their tongues.

and fish is not unlike the management of a farm. Game and fish spring from the soil and are dependent upon the soil just as surely as the farmer's crops and the farmer's livestock. Fertility of the soil, favorable seasons, and proper management are as important to wild life as they are to domestic life and cultivated fields.

"Just as successful farming operations have forced the farmer to learn farm management, so successful game and fish restoration will force our people to learn game and fish management.

"For 150 years the American farmer has been learning farm and livestock management and during this period he has made great progress, but he still finds there is much more to learn about farming. Compared to farming, conservation is in swaddling clothes. Although a husky youngster, it is still in its infancy. The farmer has his colleges of agriculture and poultry and fruit experiment stations in almost every state; vocational training schools in almost every high school, and county agents in almost every county. I look forward to the time when colleges of agriculture and game breeders' schools will be common; when game and fish experiment stations will augment our research efforts; when teachers' colleges will require their graduates to be proficient in the teaching of conservation; and when men trained in a knowledge of game and fish will serve individuals and will serve the tens of thousands of clubs and conservation organizations that will develop our nation, in much the same capacity as county agents now serve their farmer communities.

"The farmer figures prominently in the conservation movement. His relation to conservation and his interests should be given consideration. He should be taken into our confidence and made a part of our plans. He is in better position to assist our game and fish in their struggle for existence than any other. And, he owns the land on which the game is raised, which in some countries is equivalent to the ownership of the game itself. At any rate the farmer is closely connected with our wild life and it seems fundamental that he should be prominent in our minds as we make plans for the future.

"That we in Missouri are thinking of the farmer is illustrated by the plan of our auxiliary game refuge system. These refuges, ten of them, are in the most highly developed agricultural section of our state, and were established as upland game refuges. These are intended as demonstration areas where farmers may learn the possibility of game restoration. So far as I know there is no other state doing exactly this same thing.

"In these refuges we are dealing with upland game, and it is not our plan to brood or hold this game in captivity. This may be done with imported game until it is acclimated, but as soon as possible it is released. Our plan is to create an environment favorable to the quail, pheasants or other game in an open refuge where it can go and come at will. On these ten refuges, which average 1,800 acres to the refuge, is a

against the many enemies of the game. The accomplishments that we attain on these tracts we hope will be an example and an inspiration for the farmers.

"We believe the whole game and fish program is comparable to the management of a farm. The enemies of the game are like the weeds on a farm. They must be controlled. When we plant game it is very much as when the farmer plants corn. We must reduce, if not actually eradicate the enemies of the game as surely as he must control the weeds or there will be but little surplus crops for either of us to reap. The farmer has learned rotation of crops. He has learned soils and fertilization. He has learned the selection and care of seeds. He is a judge of livestock. He knows the value of tankage and other feeds. He knows how to handle the inbreeding and line breeding. He has learned much of domesticated stock that is unknown of wild life stock and its administration. When we understand game and fish management as the farmer understands his problems, the uncertainties which now confront us will be diminished and we will more clearly view the goal and the way to its attainment.

"Conservation is essential to the welfare of our nation. The opposite of conservation is desolation—a birdless, treeless, fishless country. This would not be America as we know her.

"We must conserve in order that the charm of the outdoor America shall be preserved with due honor to our heritage and to posterity; that America's well-balanced civilization, fashioned by the rugged out-of-door environments which stamped a sterling character upon the builders of this nation, shall not diminish, and that America, with a place in its broad scheme for every living thing, shall traverse the indefinite future with the integrity of her open spaces and unsullied by wanton hands, with happiness and prosperity for her people and with confidence that our nation shall not perish from this earth."

iversity for the sanctuary and there birds will be unmolested.

The sanctuary will contain cement basins where birds may drink or bathe, and feeding grounds and many bird houses. The Missoula Boy Scouts will donate bird houses for the sanctuary, some 50 being completed or under construction now by the boys.

There will be some planting of shrubbery this spring in the area near old Craig hall where the sanctuary will be started. It is planned that, in the near future, the entire university campus may be designated as a bird sanctuary.

Dr. Elrod, whose name will be used in the dedication of this sanctuary, has been head of the department of biology at the state university since February, 1897, and is one of the oldest of the university faculty members in years of service. He is known throughout the country as a biologist and has published bulletins on phases of biological studies. He came to the university from Illinois Wesleyan college.

The Missoula Bird Club officers are: President, Mrs. A. P. Tietjen; vice-president, Miss Edna Mann; treasurer, Mrs. Susan Wadell; secretary, Miss Caroline Wells.

Fishin' Time

Seems as how I can't help wishin'

While I'm seated in my chair

I was on some nice creek fishin',

Just a gettin' o' my share.

Thar's a tang tuh Springtime's feelin'

Starts th' blood to coursing fast,

Makes one wish he was a-reelin'

In some beauty caught at last.

When th' sun is just a-bornin'

O'er the distant far-flung hills,

When th' cool o' early mornin'

Fills yuh up with aches an' chills;

When yuh feel that's som'thin' lackin'

An' th' day seems extra long,

When th' fever gits tuh rackin'

Through yer system mighty strong;

Then's th' time fer gittin' busy

Fixin' up yer campin' kit,

Then's th' time ter git out "Lizzie,"

Fill th' tank an' "hit th' grit."

So I'm sortin' out my tackle,

Hooks an' sinkers, pole an' line;

I'll be thar; jest hear me cackle,

With th' gang come fishin' time.

—J. NORT WHITE,

Helena, Montana.

The Old Timer

He showed up in the springtime, when
the geese began to honk;
He signed up with the outfit and we
fattened up his bronk;
His chaps were old and tattered, but
he never seemed to mind,
'Cause for worryin' and frettin', he had
never been designed;
He's the type of cattle-puncher that has
vanished now, of course,
With his hundred-dollar saddle on his
twenty-dollar horse.

He never seemed to bother over for-
tune's ups and downs,
And he never quit his singin' when the
gang was full of frowns;
He would lose his roundup money in
an hour of swift play,
But he never seemed discouraged when
he ambled on his way.
He would hit the trail a-singin', and
his smile was out full force,
Though he'd lost his fancy saddle and
he didn't have a horse.

I have wondered where he wanders in
these late, degenerate years,
When there are no boundless ranges
and there are no long-horned steers;
But I'll warrant he is cheerful, though
unfriendly is the trail,
And his cigaret is glowing, though his
grub supply may fail,
For he had life's happy secret—he had
traced it to the source
In his hundred dollar saddle on his
twenty dollar horse.

—Arthur Chapman.

Husband—"Have you made up your
mind to stay in?"

Wife—"No, I've made up my face to
go out."



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Here is an old one perhaps you have
forgotten: Head your watch so that the
hour hand is pointly directly at the
sun. Half way between the hour hand
and 12 o'clock is due south. Try this
any time of day and then remember it
when you are lost and have no com-
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A small roll of adhesive tape about
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Unloading the Elk



RUGO RENLUND of Red Lodge, who
is active in the work of conserv-
ing Montana's fish and game sup-
ply, snapped this picture of a ship-
ment of elk from the National Bison
Range at Moiese being unloaded from
the truck on the First West Fork of
Rock Creek, above Red Lodge, in the
mountains. According to reports from
Ranger McLean the elk are making
themselves at home near the spot where
they were liberated. Two have become
attached to a band of deer. Mr. Ren-
lund, who is a native of that district,
asserts that it is a natural winter
feeding ground for elk and that by
keeping range sheep away from the
area they should thrive.

OH, SAY, CAN YOU SEE—?

She—"So you kissed that painted
creature?"

He—"Yes, I saluted the colors."

Cabby—"Taxi, sir?"

Cabbaged—"Thanksh, I wash wun-
nerin' wat it wash."

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What Is It?

HERE'S material for an intelligence test among Montana sportsmen who regard themselves as authorities on wild life of the past, present and future. Students of geology, fossils, the buffalo herds, the prehistoric dinosaurs and other mammals should be quick to answer the question: "What Montana animal once wore this skull?" Looks like mountain sheep horns. Or perhaps the horns are those of a domestic ram brought westward by Lewis and Clark or Dave Hilger or Tom



Name It and Claim It

Peasley, Jess Pierman, Bob Fletcher, George Neill or some other intrepid explorer who crossed the plains by ox teams to discover that "thar's gold in them there hills." The nose bone resembles that of a fair-sized pack rat. Or it may be that of a pohunk or a whosit, yet it has no nostrils and the whosit always called its mate with



Hereford or Holstein?

nasal variations. Lew Penwell of Helena is an authority on fossils—with-out mentioning any names—yet the picture of the mystery skull has stumped him.

It's a cinch that the picture below is that of a Montana buffalo, but what would you name the picture above in case you should meet him in the dark?

Don't breathe a word of the secret to authorities of the Smithsonian institute or other groups of scientists, but no such animal ever existed and lugged around a skull such as shown in the top picture.

It's a nature fake cleverly arranged by O. E. Stephi, leader of rodent con-

trol, with headquarters at Bozeman, who is associated with the Bureau of Biological Survey of the U. S. Department of Agriculture.

Mr. Stephi prepared the specimen by using the horns of a big horn sheep and attaching them to carefully sawed portions of a buffalo skull. The lower picture is that of a buffalo skull and horns picked up on the National Bison Range by members of a field crew engaged in poisoning squirrels on that area of 18,000 acres.

TIME TO SETTLE

Customer: "I've brought that last pair of trousers to be reseated. You know I sit a lot."

Tailor: "Yes, and I hope you've brought the bill to be receipted, too. You know, I've stood a lot."

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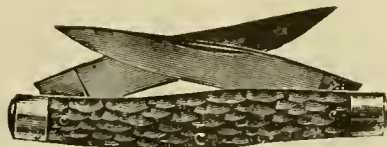
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Montana Womar Sheep



All winter long this woman fed a band of mountain sheep in Glacier National Park 53 miles back from the Great Northern Railway. She is Mrs. Fred Thompson, wife of the caretaker at Many Glaciers Hotel, just a few miles south of the Canadian border. She says they get just as tame as they are hungry when the blizzards drive 'em down out of the mountains.

My Best Friend

MY TRUEST and best friend is my dog. When my last penny is gone, and hunger and want stare me in the face, when my last human earthly friend has turned his back on me and my credit is all gone, that faithful beast will be true to the end. He will share my sorrow and rejoice with me in success. What a heart of love and gratitude he carries under his shaggy skin! He does not pretend to be a human by being a friend to my face and a foe behind my back. He's proud to be called a dog, even if God did give him the instinct of a human.

He guards my interests as he would his own, and is satisfied with only a bone. On the cold hard ground he'll make his bed, though the bleak north wind may blow. Between his paws he will lay his head, and guard me against each foe; he will not pretend to be my friend, while looking me in the face, then behind my back his affections lack, and leave when I'm in disgrace. He's only a dog but is true as steel, on his love I can depend; he's at my heel with a fair, square deal, and will stick to me to the end. When misfortunes frown he won't turn me down, even though I am old and poor; through my trouble and care he will always be there, and ready to lick each sore.

You can't fool a dog. He does not judge the hearts of men by their outside appearance, for with his animal instinct he is able to read the souls of men, and he can see further and bear more than any living human. His eyes, ears and tail are his only means of expression. He says "Good morning" with his ears and eyes, and his "thank

you" with his tail. A little pat on the head will bring more gratitude from a dog than a gold mine would from a human; and he'll express more love and gratitude in one wag of his tail than any human can with his mouth. He sleeps with one eye and uses the other to guard his master, and all the honor and glory he asks is to stay by his master's side. A harsh word will relax the tension of his ears and tail,

and one kind word will start the dog machinery of forgiveness in operation. When the world is too busy or too selfish to sympathize with me in my affliction, my dog will sit by my side with his nose on my knee and look up into my eyes as much as to say, "Old Pal, I'm sorry, I can't be more than a dog to you, but I'll be right here to answer your call in anything a dog can do."—Our Dumb Animals.

TREATMENT FOR SUNBURN

In case you expose yourself too long and get sunburned try the following treatment recommended by the Public Health Service:

Take one-half pint of hot water and stir into it a level tablespoonful of boric-acid powder. To this add 20 drops of carbolic acid and shake well. This lotion should be dabbed on the inflamed skin with a small piece of cotton or sprayed on with an atomizer. Don't rub it into the skin. Repeat the treatment every half hour if necessary. When medicines are not available cold compresses will relieve the badly burned areas.

BAD MANAGEMENT

A small boy, while walking on a railroad track, was astonished when he saw that two fast freight trains running on the same track were about to crash head-on. Much frightened, he took to a nearby high bank where he witnessed the smashup. Later some officials, learning that there had been an eye-witness to the wreck, found him and asked:

"What were your thoughts at the time of the crash?"

"Well," the boy answered slowly, "I thought it was a darn poor way to run a railroad."

Killer-Cats Bite Dust In Mineral County



Ben Vogler, premier trapper of Mineral county, has a rare display of mountain lions killed during the winter in the eastern part of the state while in the employ of the Fish and Game Department and the Biological Survey. The killing of these eight deer-eating lions by experienced trappers employed with funds paid by sportsmen for fishing and hunting licenses has saved a lot of venison.